Chapter 3. Airport Traffic Control- Terminal

Section 1. General

3-1-1. PROVIDE SERVICE

Provide airport traffic control service based only upon observed or known traffic and airport conditions.

NOTE-
When operating in accordance with CFR's, it is the responsibility of the pilot to avoid collision with other aircraft. However, due to the limited space around terminal locations, traffic information can aid pilots in avoiding collision between aircraft operating within Class B, Class C, or Class D surface areas and the terminal radar service areas, and transiting aircraft operating in proximity to terminal locations.

3-1-2. PREVENTIVE CONTROL

Provide preventive control service only to aircraft operating in accordance with a letter of agreement. When providing this service, issue advice or instructions only if a situation develops which requires corrective action.

NOTE-
Preventive control differs from other airport traffic control in that repetitious, routine approval of pilot action is eliminated. Controllers intervene only when they observe a traffic conflict developing.

3-1-3. USE OF ACTIVE RUNWAYS

The local controller has primary responsibility for operations conducted on the active runway and must control the use of those runways. Positive coordination and control is required as follows:

NOTE-
Exceptions may be authorized only as provided in para 1-1-9, Constraints Governing Supplements and Procedural Deviations, and FAAO 7210.3, Use of Active Runways, para 10-1-7, where justified by extraordinary circumstances at specific locations.

REFERENCE-
FAAO 7110.65, Constraints Governing Supplements and Procedural Deviations, Para 1-1-9.
FAAO 7210.3, Use of Active Runways, Para 10-1-7.

a. Ground control must obtain approval from local control before authorizing an aircraft or a vehicle to cross or use any portion of an active runway. The coordination shall include the point/intersection at the runway where the operation will occur.

PHRASEOLOGY-
CROSS (runway) AT (point/intersection).

b. When the local controller authorizes another controller to cross an active runway, the local controller shall verbally specify the runway to be crossed and the point/intersection at the runway where the operation will occur preceded by the word "cross."

PHRASEOLOGY-
CROSS (runway) AT (point/intersection).

c. The ground controller shall advise the local controller when the coordinated runway operation is complete. This may be accomplished verbally or through visual aids as specified by a facility directive.

d. *USA/USAF NOT APPLICABLE.* Authorization for aircraft/vehicles to taxi/proceed on or along an active runway, for purposes other than crossing, shall be provided via direct communications on the appropriate local control frequency. This authorization may be provided on the ground control frequency after coordination with local control is completed for those operations specifically described in a facility directive.

NOTE-
The USA and USAF establish local operating procedures in accordance with USA and USAF directives.

e. The local controller shall coordinate with the ground controller before using a runway not previously designated as active.

REFERENCE-
FAAO 7110.65, Coordination Between Local and Ground Controllers, Para 3-1-4.

3-1-4. COORDINATION BETWEEN LOCAL AND GROUND CONTROLLERS

Local and ground controllers shall exchange information as necessary for the safe and efficient use of airport runways and movement areas. This may be accomplished via verbal means, flight progress strips, other written information, or automation displays. As a minimum, provide aircraft identification and applicable runway/intersection/taxiway information as follows:

a. Ground control shall notify local control when a departing aircraft has been taxied to a runway other than one previously designated as active.

REFERENCE-
FAAO 7110.65, Use of Active Runways, Para 3-1-3.
FAAO 7210.3, Selecting Active Runways, Para 10-1-6.

b. Ground control shall notify local control of any aircraft taxied to an intersection for takeoff, unless departure from that intersection is specifically designated via prior coordination or facility directive as the standard operating procedure for the runway to be used. When standard procedures require departures to use a specific intersection, ground control shall notify local control when aircraft are taxied to other portions of the runway for departure.

REFERENCE-
FAAO 7110.65, Wake Turbulence Separation for Intersection Departures, Para 3-9-7.

c. When the runways in use for landing/departing aircraft are not visible from the tower or the aircraft using them are not visible on radar, advise the local/ground controller of the aircraft's location before releasing the aircraft to the other controller.

3-1-5. VEHICLES/EQUIPMENT/PERSONNEL ON RUNWAYS

a. Ensure that the runway to be used is free of all known ground vehicles, equipment, and personnel before a departing aircraft starts takeoff or a landing aircraft crosses the runway threshold.

b. Vehicles, equipment, and personnel in direct communications with the control tower may be authorized to operate up to the edge of an active runway surface when necessary. Provide advisories as specified in para 3-1-6, Traffic Information, and para 3-7-5, Precision Approach Critical Area, as appropriate.

PHRASEOLOGY-
PROCEED AS REQUESTED; AND IF NECESSARY, (additional instructions or information).

NOTE-
Establishing hold lines/signs is the responsibility of the airport manager. Standards for surface measurements, markings, and signs are contained in the following Advisory Circulars; AC 150/5300-13, AC 150/5340-1, AC 150/5340-18 and AC 150/5340-1G. The operator is responsible to properly position the aircraft, vehicle, or equipment at the appropriate hold line/sign or designated point. The requirements in para 3-1-12, Visually Scanning Runways, remain valid as appropriate.

REFERENCE-
FAAO 7110.65, Runway Proximity, Para 3-7-4.
FAAO 7110.65, Touch-and-Go or Stop-and-Go or Low Approach, Para 3-8-2.
FAAO 7110.65, Altitude Restricted Low Approach, Para 3-10-10.
AC 150/5300-13, Airport Design.
AC 150/5340-1G, Standards for Airport Markings.
14 CFR Section 91.129, Operations in Class D Airspace.
AIM, Obstruction Lights, Para 2-2-3.
P/CG Term- Runway in Use/Active Runway/Duty Runway.

3-1-6. TRAFFIC INFORMATION

a. Describe vehicles, equipment, or personnel on or near the movement area in a manner which will assist pilots in recognizing them.

EXAMPLE-
"Mower left of runway two seven."
"Trucks crossing approach end of runway two five."
"Workman on taxiway Bravo."
"Aircraft left of runway one eight."

b. Describe the relative position of traffic in an easy to understand manner, such as "to your right" or "ahead of you."

EXAMPLE-
"Traffic, U.S. Air MD-Eighty on downwind leg to your left."
"King Air inbound from outer marker on straight-in approach to runway one seven."

c. When using a CTRD, you may issue traffic advisories using the standard radar phraseology prescribed in para 2-1-21, Traffic Advisories.

REFERENCE-
FAAO 7110.65, Altitude Restricted Low Approach, Para 3-10-10.

3-1-7. POSITION DETERMINATION

Determine the position of an aircraft before issuing taxi instructions or takeoff clearance.

NOTE-
The aircraft's position may be determined visually by the controller, by pilots, or through the use of the ASDE.

3-1-8. LOW LEVEL WIND SHEAR ADVISORIES

a. When low level wind shear is reported by pilots or detected on any of the Doppler or Low Level Wind Shear Alert Systems (LLWAS), controllers shall issue the alert to all arriving and departing aircraft until the alert is broadcast on the ATIS and pilots indicate they have received the appropriate ATIS code. A statement shall be included on the ATIS for 20 minutes following the last report or indication of wind shear.

REFERENCE-
FAAO 7110.65, PIREP Information, Para 2-6-3.
FAAO 7110.65, Content, Para 2-9-3.
FAAO 7110.65, Landing Information, Para 3-10-1.

PHRASEOLOGY-
LOW LEVEL WIND SHEAR ADVISORIES IN EFFECT.

b. At facilities without ATIS, ensure that wind shear information is broadcast to all arriving and departing aircraft for 20 minutes following the last report or indication of wind shear.

1. At locations equipped with LLWAS, the local controller shall provide wind information as follows:

NOTE-
The LLWAS is designed to detect low level wind shear conditions around the periphery of an airport. It does not detect wind shear beyond that limitation.

REFERENCE-
FAAO 7210.3, Low Level Wind Shear Alert System (LLWAS), Para 10-3-3.

(a) If an alert is received, issue the airport wind and the displayed field boundary wind.

PHRASEOLOGY-
WIND SHEAR ALERT. AIRPORT WIND (direction) AT (velocity). (Location of sensor) BOUNDARY WIND (direction) AT (velocity).

(b) If multiple alerts are received, issue an advisory that there are wind shear alerts in two/several/all quadrants. After issuing the advisory, issue the airport wind in accordance with para 3-9-1, Departure Information, followed by the field boundary wind most appropriate to the aircraft operation.

PHRASEOLOGY-
WIND SHEAR ALERTS TWO/SEVERAL/ALL QUADRANTS. AIRPORT WIND (direction) AT (velocity). (Location of sensor) BOUNDARY WIND (direction) AT (velocity).

(c) If requested by the pilot, issue specific field boundary wind information even though the LLWAS may not be in alert status.

NOTE-
The requirements for issuance of wind information remain valid as appropriate under this paragraph, para 3-9-1, Departure Information and para 3-10-1, Landing Information.

2. LLWAS "Network Expansion" (LLWAS NE) which is integrated with TDWR, and LLWAS "Relocation/Sustainment" (LLWAS-RS) provide the capability of displaying microburst alerts, wind shear alerts and wind information oriented to the threshold or departure end of a runway. TDWR and WSP are also designed to detect wind shear and microburst activity. ITWS will also provide tornado detection and alert. The associated ribbon display allows the controller to read the displayed alert without any need for interpretation.

(a) If a wind shear or microburst alert is received for the runway in use, issue the alert information for that runway to arriving and departing aircraft as it is displayed on the ribbon display.

PHRASEOLOGY-
(Runway) (arrival/departure) WIND SHEAR/MICROBURST ALERT, (windspeed) KNOT GAIN/LOSS, (location).

EXAMPLE-
17A MBA 40K - 3MF

PHRASEOLOGY-
RUNWAY 17 ARRIVAL MICROBURST ALERT 40 KNOT LOSS 3 MILE FINAL.

EXAMPLE-
17D WSA 25K+ 2MD

PHRASEOLOGY-
RUNWAY 17 DEPARTURE WIND SHEAR ALERT 25 KNOT GAIN 2 MILE DEPARTURE.

(b) If requested by the pilot or deemed appropriate by the controller, issue the displayed wind information oriented to the threshold or departure end of the runway.

PHRASEOLOGY-
(Runway) DEPARTURE/THRESHOLD WIND (direction) AT (velocity).

(c) Alerts occurring on the edge of the system, or if the system is unable to distinguish between wind shear and microbursts; an alert message will be displayed advising of a possible wind shear outside of the system network.

PHRASEOLOGY-
(Appropriate wind or alert information) POSSIBLE WIND SHEAR OUTSIDE THE NETWORK.

(d) If unstable conditions produce multiple alerts, issue an advisory of multiple wind shear/microburst alerts followed by specific alert or wind information.

PHRASEOLOGY-
MULTIPLE WIND SHEAR/MICROBURST ALERTS (specific alert or wind information).

(e) When a microburst/tornado is detected, a statement shall be included on the ATIS broadcast, "MICROBURST/TORNADO ADVISORIES IN EFFECT." This item shall be included on the ATIS for at least 20 MINUTES following the microburst alert. Issue the displayed tornado advisory oriented to the direction from the airport.

PHRASEOLOGY-
TORNADO ALERT (direction from airport).

(f) The LLWAS-NE and LLWAS-RS are designed to operate with as many as 50 percent of the total sensors inoperative. When all three remote sensors designated for a specific runway arrival or departure wind display line are inoperative then the LLWAS-NE

or LLWAS-RS for that runway arrival/departure shall be considered out of service. When a specific runway arrival or departure wind display line is inoperative and wind shear/microburst activity is likely; (e.g.; frontal activity, convective storms, PIREP's), a statement shall be included on the ATIS, "WIND SHEAR AND MICROBURST INFORMATION FOR RUNWAY (runway number) ARRIVAL/ DEPARTURE NOT AVAILABLE."

NOTE-
The geographic situation display (GSD) is a supervisory planning tool and is not intended to be a primary tool for microburst, wind shear or tornado alerts.

3-1-9. USE OF TOWER RADAR DISPLAYS

a. Uncertified tower display workstations shall be used only as an aid to assist controllers in visually locating aircraft or in determining their spacial relationship to known geographical points. Radar services and traffic advisories are not to be provided using uncertified tower display workstations. General information may be given in an easy to understand manner, such as "to your right" or "ahead of you."

EXAMPLE-
"Follow the aircraft ahead of you passing the river at the stacks." "King Air passing left to right."

REFERENCE-
FAAO 7210.3, Functional Use of Certified Tower Radar Displays, Para 10-5-3.

b. Local controllers may use certified tower radar displays for the following purposes:

1. To determine an aircraft's identification, exact location, or spatial relationship to other aircraft.

NOTE-
This authorization does not alter visual separation procedures. When employing visual separation, the provisions of para 7-2-1, Visual Separation, apply unless otherwise authorized by AAT-1.

REFERENCE-
FAAO 7110.65, Primary Radar Identification Methods, Para 5-3-2.
FAAO 7110.65, Beacon Identification Methods, Para 5-3-3.
FAAO 7110.65, Terminal Automation Systems Identification Methods, Para 5-3-4.

2. To provide aircraft with radar traffic advisories.

3. To provide a direction or suggested headings to VFR aircraft as a method for radar identification or as an advisory aid to navigation.

PHRASEOLOGY-
(Identification), PROCEED (direction)-BOUND, (other instructions or information as necessary),

or

(identification), SUGGESTED HEADING (degrees), (other instructions as necessary).

NOTE-
It is important that the pilot be aware of the fact that the directions or headings being provided are suggestions or are advisory in nature. This is to keep the pilot from being inadvertently mislead into assuming that radar vectors (and other associated radar services) are being provided when, in fact, they are not.

4. To provide information and instructions to aircraft operating within the surface area for which the tower has responsibility.

EXAMPLE-
"TURN BASE LEG NOW."

NOTE-
Unless otherwise authorized, tower radar displays are intended to be an aid to local controllers in meeting their responsibilities to the aircraft operating on the runways or within the surface area. They are not intended to provide radar benefits to pilots except for those accrued through a more efficient and effective local control position. In addition, local controllers at nonapproach control towers must devote the majority of their time to visually scanning the runways and local area; an assurance of continued positive radar identification could place distracting and operationally inefficient requirements upon the local controller. Therefore, since the requirements of para 5-3-1, Application, cannot be assured, the radar functions prescribed above are not considered to be radar services and pilots should not be advised of being in "radar contact."

c. Additional functions may be performed provided the procedures have been reviewed and authorized by appropriate management levels.

REFERENCE-
FAAO 7110.65, Minima, Para 5-5-4.

3-1-10. OBSERVED ABNORMALITIES

When requested by a pilot or when you deem it necessary, inform an aircraft of any observed abnormal aircraft condition.

PHRASEOLOGY-
(Item) APPEAR/S (observed condition).

EXAMPLE-
"Landing gear appears up."
"Landing gear appears down and in place."
"Rear baggage door appears open."

3-1-11. SURFACE AREA RESTRICTIONS

a. If traffic conditions permit, approve a pilot's request to cross Class C or Class D surface areas or exceed the Class C or Class D airspace speed limit. Do not, however, approve a speed in excess of 250 knots (288 mph) unless the pilot informs you a higher minimum speed is required.

NOTE-
14 CFR Section 91.117 permits speeds in excess of 250 knots (288 mph) when so required or recommended in the airplane flight manual or required by normal military operating procedures.

REFERENCE-
FAAO 7110.65, Surface Areas, Para 2-1-16.

b. Do not approve a pilot's request or ask a pilot to conduct unusual maneuvers within surface areas of Class B, C, or D airspace if they are not essential to the performance of the flight.

EXCEPTION. A pilot's request to conduct aerobatic practice activities may be approved, when operating in accordance with a letter of agreement, and the activity will have no adverse affect on safety of the air traffic operation or result in a reduction of service to other users.

REFERENCE-
FAAO 7210.3, Aerobatic Practice Areas, Para 5-4-7.

NOTE-
These unusual maneuvers include unnecessary low passes, unscheduled flybys, practice instrument approaches to altitudes below specified minima (unless a landing or touch-and-go is to be made), or any so-called "buzz jobs" wherein a flight is conducted at a low altitude and/or a high rate of speed for thrill purposes. Such maneuvers increase hazards to persons and property and contribute to noise complaints.

3-1-12. VISUALLY SCANNING RUNWAYS

a. Local controllers shall visually scan runways to the maximum extent possible.

b. Ground control shall assist local control in visually scanning runways, especially when runways are in close proximity to other movement areas.

3-1-13. ESTABLISHING TWO-WAY COMMUNICATIONS

Pilots are required to establish two-way radio communications before entering the Class D airspace. If the controller responds to a radio call with, "(a/c call sign) standby," radio communications have been established and the pilot can enter the Class D airspace. If workload or traffic conditions prevent immediate provision of Class D services, inform the pilot to remain outside the Class D airspace until conditions permit the services to be provided.

PHRASEOLOGY-
(A/c call sign) REMAIN OUTSIDE DELTA AIRSPACE AND STANDBY.

REFERENCE-
FAAO 7110.65, Visual Separation, Para 7-2-1.

3-1-14. GROUND OPERATIONS WHEN VOLCANIC ASH IS PRESENT

When volcanic ash is present on the airport surface, and to the extent possible:

a. Avoid requiring aircraft to come to a full stop while taxiing.

b. Provide for a rolling takeoff for all departures.

NOTE-
When aircraft begin a taxi or takeoff roll on ash contaminated surfaces, large amounts of volcanic ash will again become airborne. This newly airborne ash will significantly reduce visibility and will be ingested by the engines of following aircraft.

REFERENCE-
AIM, Flight Operations in Volcanic Ash, Para 7-5-8.